Advocating for fair, affordable, environmentally responsible energy policy.

Consumer Protection for 31 years

Project	Savings to Customers
Grand Gulf	$1,150,000,000
Current Choice program	$5,940,000
City wide Energy Efficiency program seed money from FERC	$900,000
2005/2006 rate case (ENO), Bankruptcy proceedings	$3,000,000
CDBG money used, not customers, to pay for Katrina damages	$200,000,000
Energy Smart (life of measures)	$65,630,724
Little Gypsy coal conversion cancelation	$1,900,000,000
NRG canceling coal conversion	$500,000,000
SWEPCO wind farm	$56,000,000
Entergy Louisiana, Entergy Gulf States Rate Case	$200,000,000
TOTAL	**$4,081,470,724**

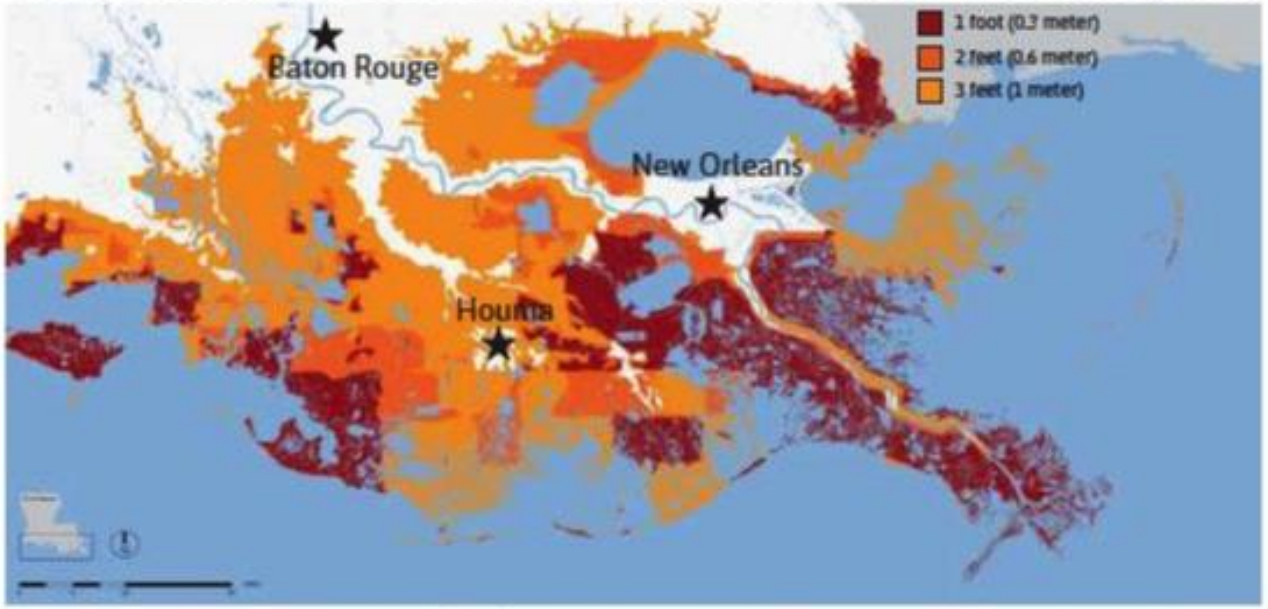
A Just Transition

Cleaner Power, A Stronger Economy

- **Carbon Reductions, Sea Level Rise & Coastal Restoration**
- **Energy Efficiency, the Lowest Cost Path**
- **Louisiana's Renewable Energy Resources**
- **Existing Planning, Existing Consensus**
- **Sharpening the Pencil**

Climate Change and Louisiana

Predicted Louisiana land loss with 1.0 to 3.3 feet relative sea level rise by 2100



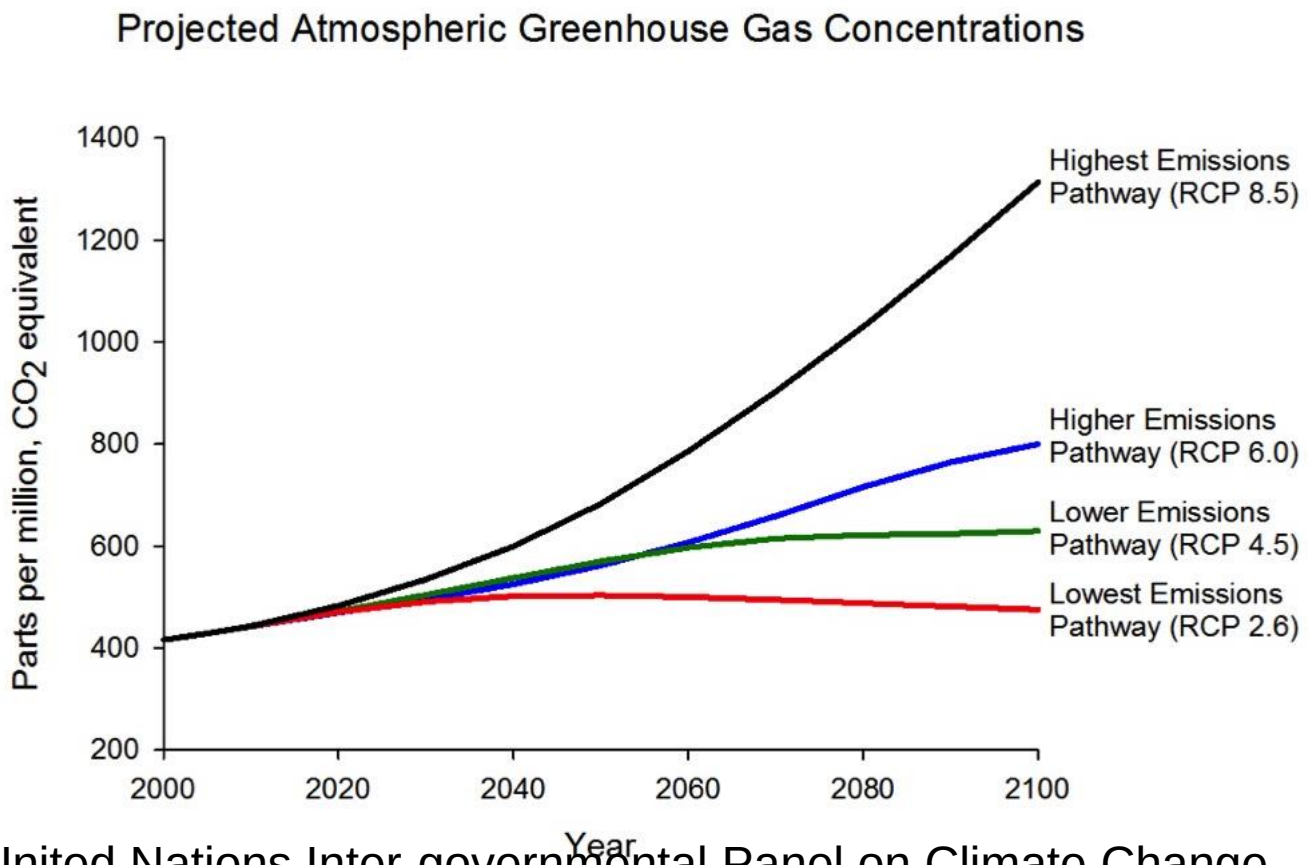
Source: Carbonell, A. & Meffert, D.J. (2009). Climate change and the resilience of New Orleans: The adaptation of deltaic urban form. World Bank.

Carbon-Emissions Predict Sea Level Rise

Component	RCP2.6	RCP4.5	RCP6.0	RCP8.5
Estimated SLR in 2081-2100 Relative to 1986-2005				
Thermal Expansion	0.14	0.19	0.19	0.27
Glaciers	0.10	0.12	0.12	0.16
Greenland	0.07	0.08	0.08	0.12
Antarctica	0.05	0.05	0.05	0.03
Land Water Storage	0.04	0.04	0.04	0.04
Sum	0.40	0.47	0.47	0.63
"Likely Range"	0.26-0.55	0.32-0.63	0.33-0.63	0.45-0.82

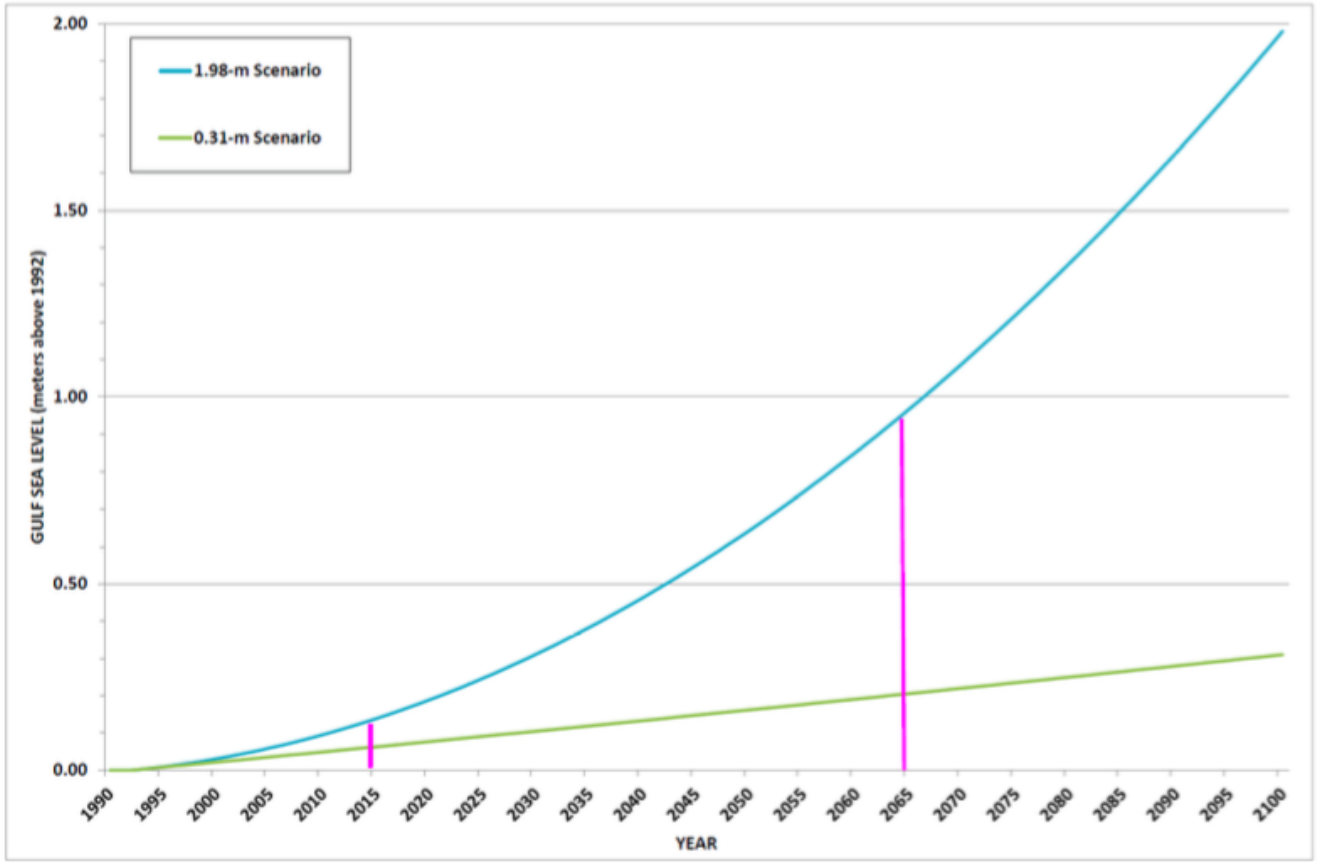
Source: Louisiana Coastal Protection and Restoration DRAFT 2017 State Master Plan

Carbon-Emissions Predict Sea Level Rise



Source: United Nations Inter-governmental Panel on Climate Change

Carbon Emissions & Sea Level Rise in LA Coastal Master Plan



Source: Louisiana Coastal Protection and Restoration DRAFT 2017 State Master Plan

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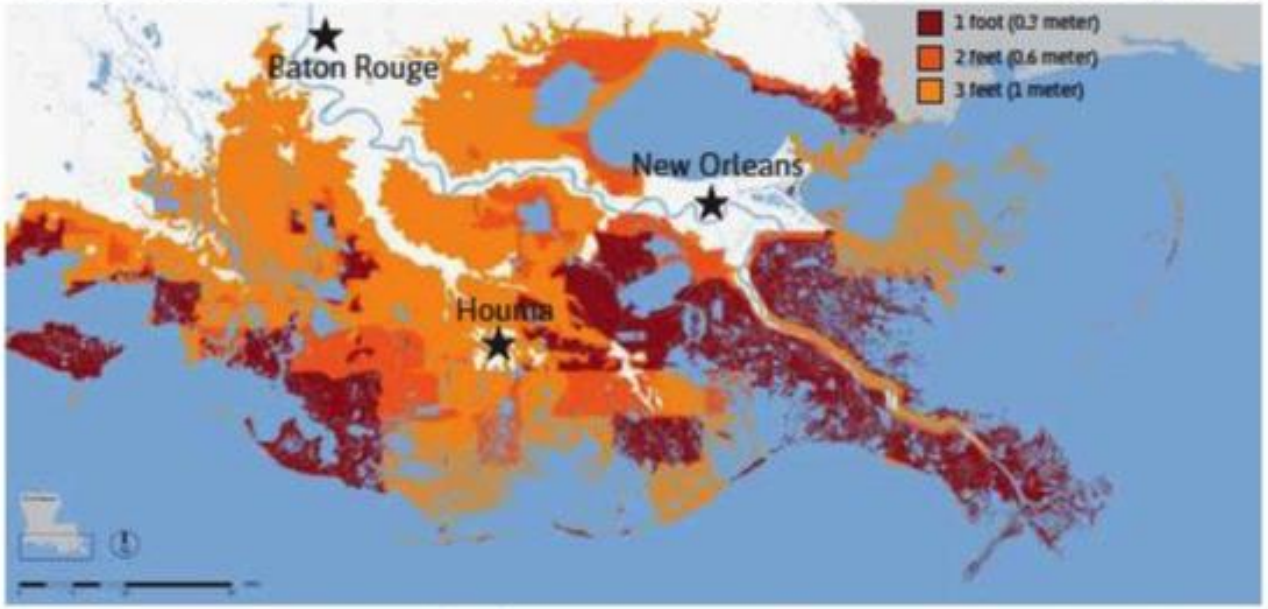

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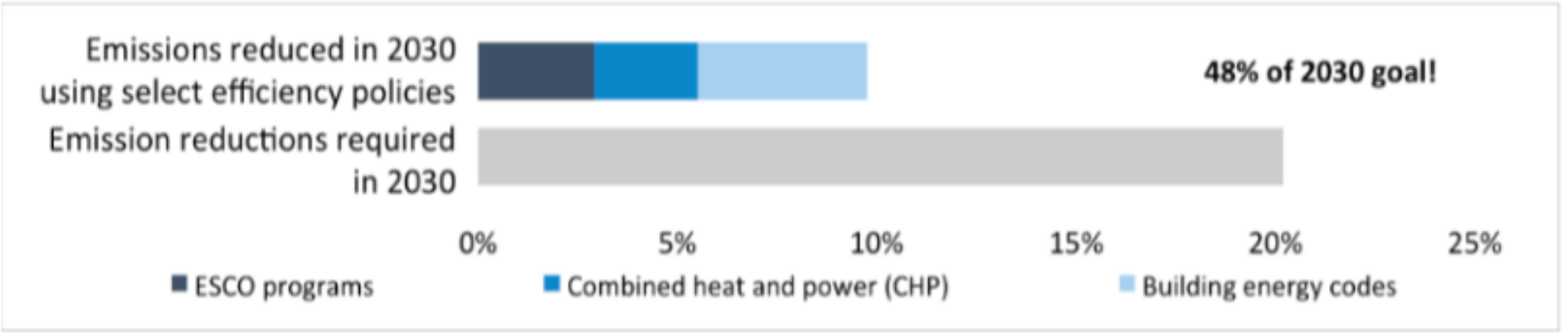
Energy Efficiency, Lowest Cost Path

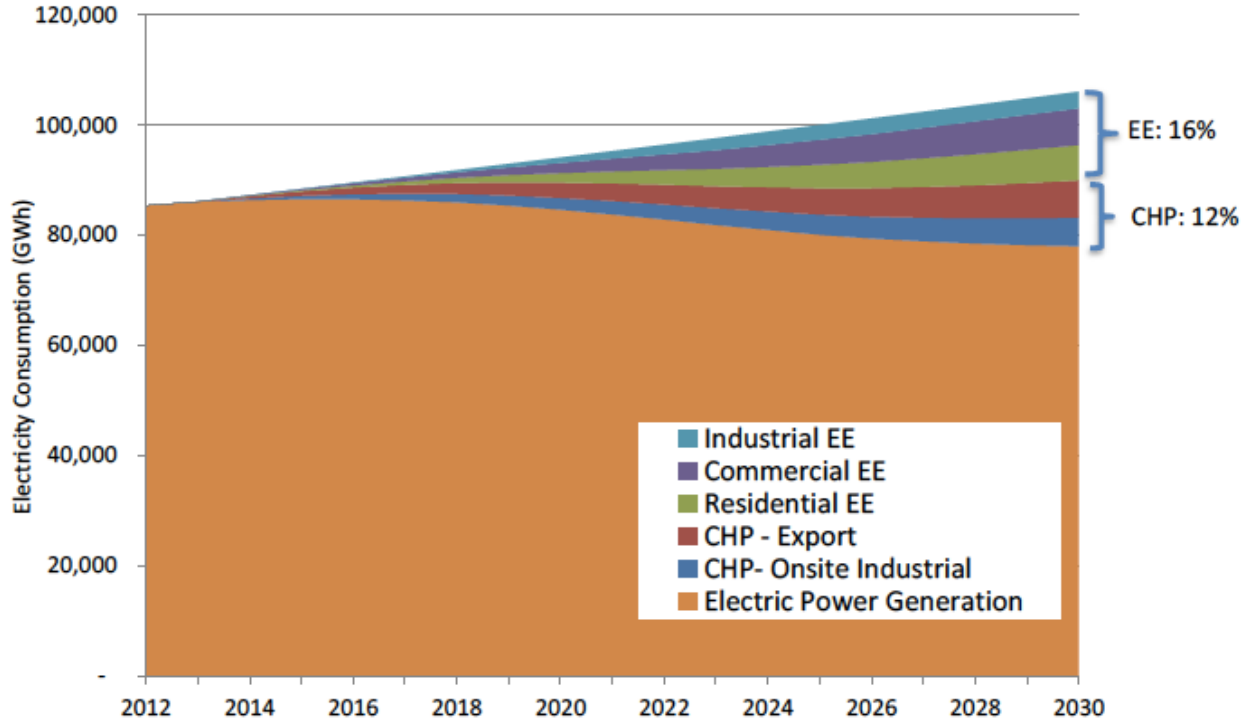


What does this mean for Louisiana?

Emission Reductions by 2030 (short tons of CO2 as % of 2012 baseline)	20%
EPA 2030 emission rate goal (lbs of CO2/MWh)	1,121
Emission rate achieved by selected measures in 2030 (lbs of CO2/MWh)	1,203
Cumulative utility bill **SAVINGS** through 2030 (million 2011$)	**$10,904**

Energy Efficiency Potential in Louisiana

Figure ES-1. Electricity Energy Efficiency (EE) and CHP Program and Policy Potential by 2030



Energy Efficiency, Lowest Cost Path

Just 1 Year of Energy Efficiency Programs in Louisiana

Utility	Savings for Every $1 spent	kWh Saved	% of Program Goal Achieved	Total Net Benefit to Customers
Entergy	$1.77	10,189,606	118%	$2,530,000
SWEPCO	$1.96	7,129,259	118%	$2,620,074
Cleco	$1.78	15,285,667	100.8%	$3,435,329

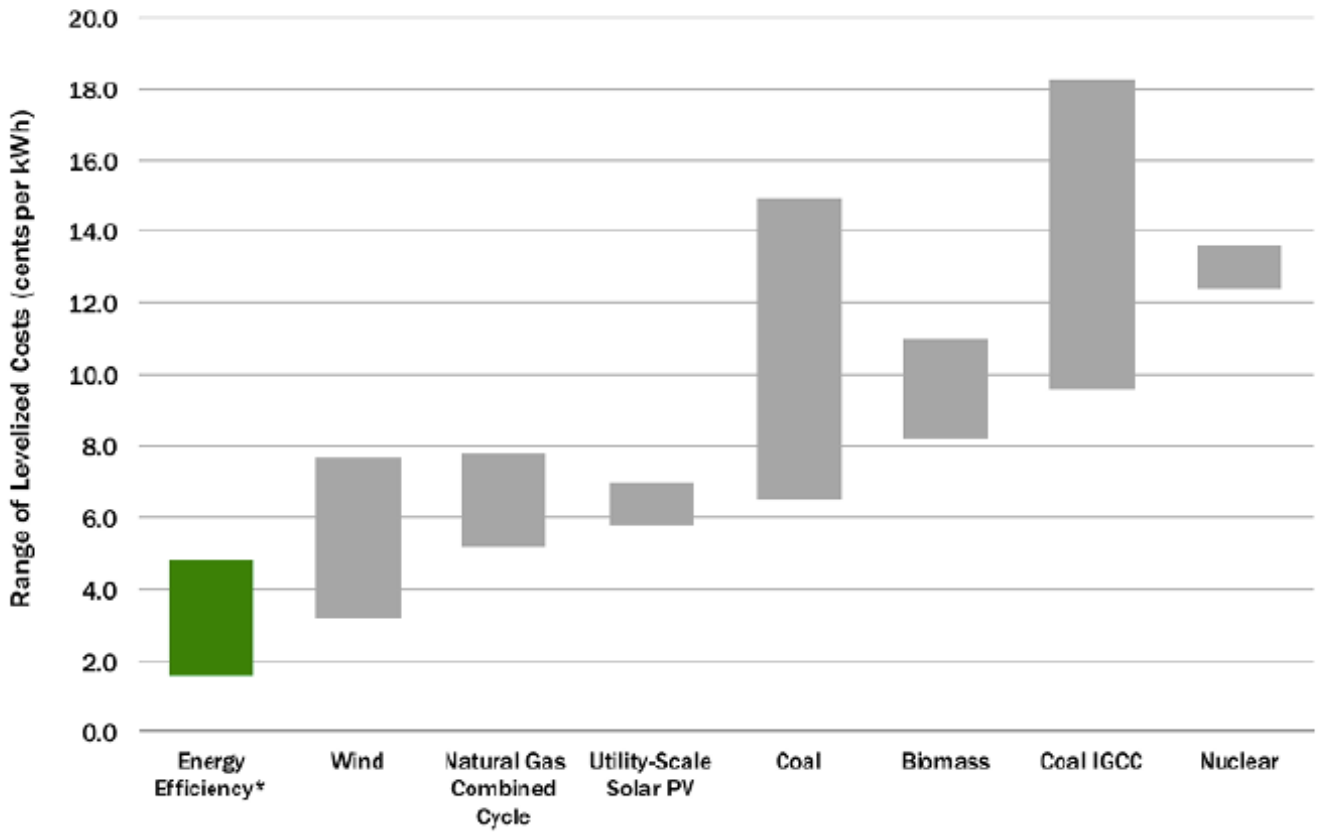
Energy Efficiency, Lowest Cost Path

5 Years of Energy Efficiency Programs in New Orleans

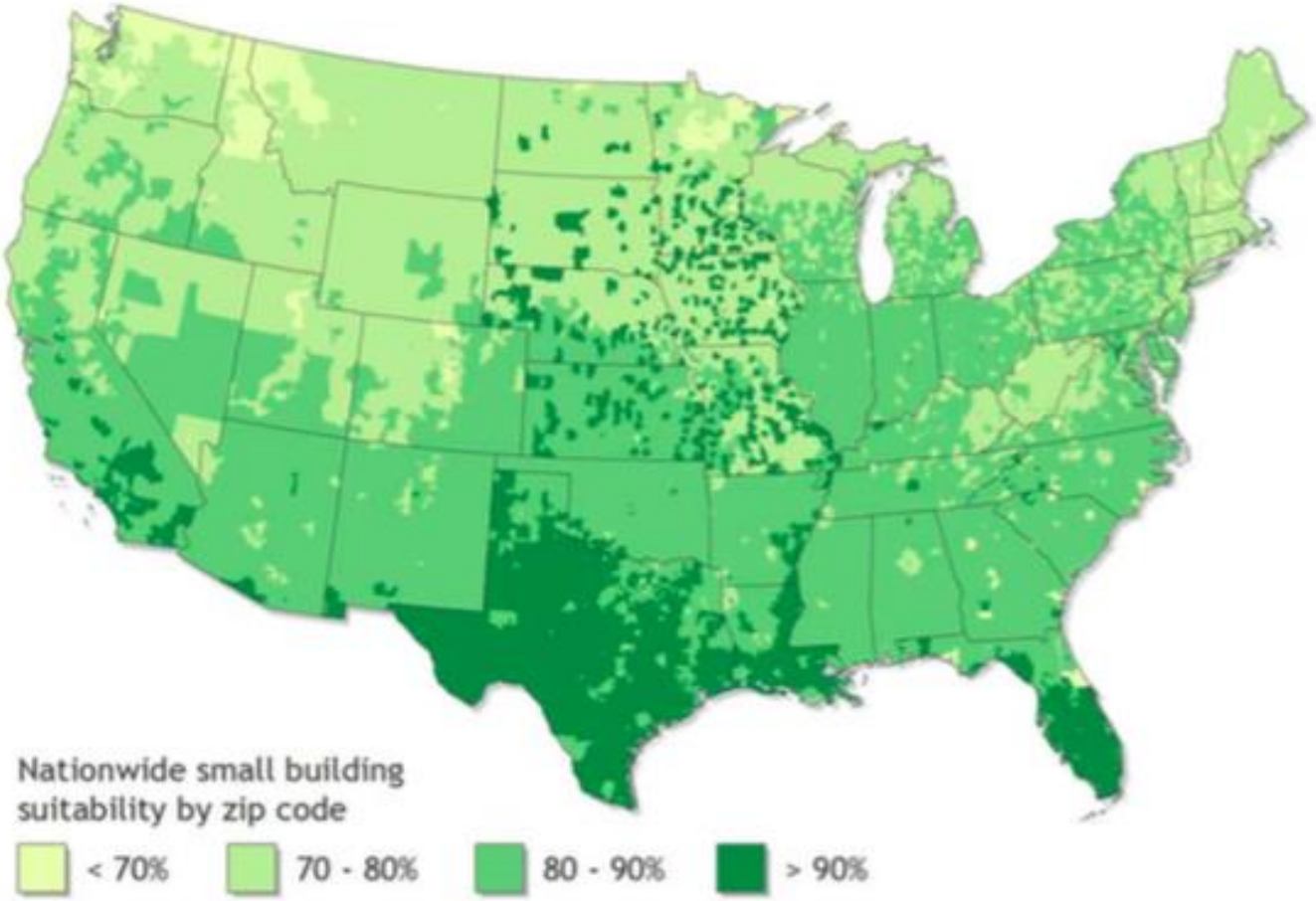
Utility	Savings for Every $1 spent	kWh Saved	% of Program Goal Achieved	Total Net Benefit to Customers
Entergy New Orleans	$1.39	71,794,872	Over 100% (averaged)	$61,025,641

Carbon Savings = 2,004,181,696 lbs

Energy Efficiency, Lowest Cost Path



Louisiana's Renewable Energy Resources



Louisiana's Renewable Energy Resources

Louisiana's Renewable Energy Resources

Table 2. Technical Potential of Rooftop PV from all Building Sizes within Boundaries of Cities Completely Covered by Lidar Data

City	Installed Capacity Potential (GW)	Annual Generation Potential (GWh/year)	Ability of PV to meet Estimated Consumption
Mission Viejo, CA	0.4	587	88%
Concord, NH	0.2	194	72%
Sacramento, CA	1.5	2,293	71%
Buffalo, NY	1.2	1,399	68%
Atlanta, GA	1.7	2,129	41%
New Orleans, LA	2.1	2,425	39%

Source: NREL Rooftop Solar Photovoltaic Technical Potential in the US: A Detailed Assessment

Existing Planning, Existing Consensus

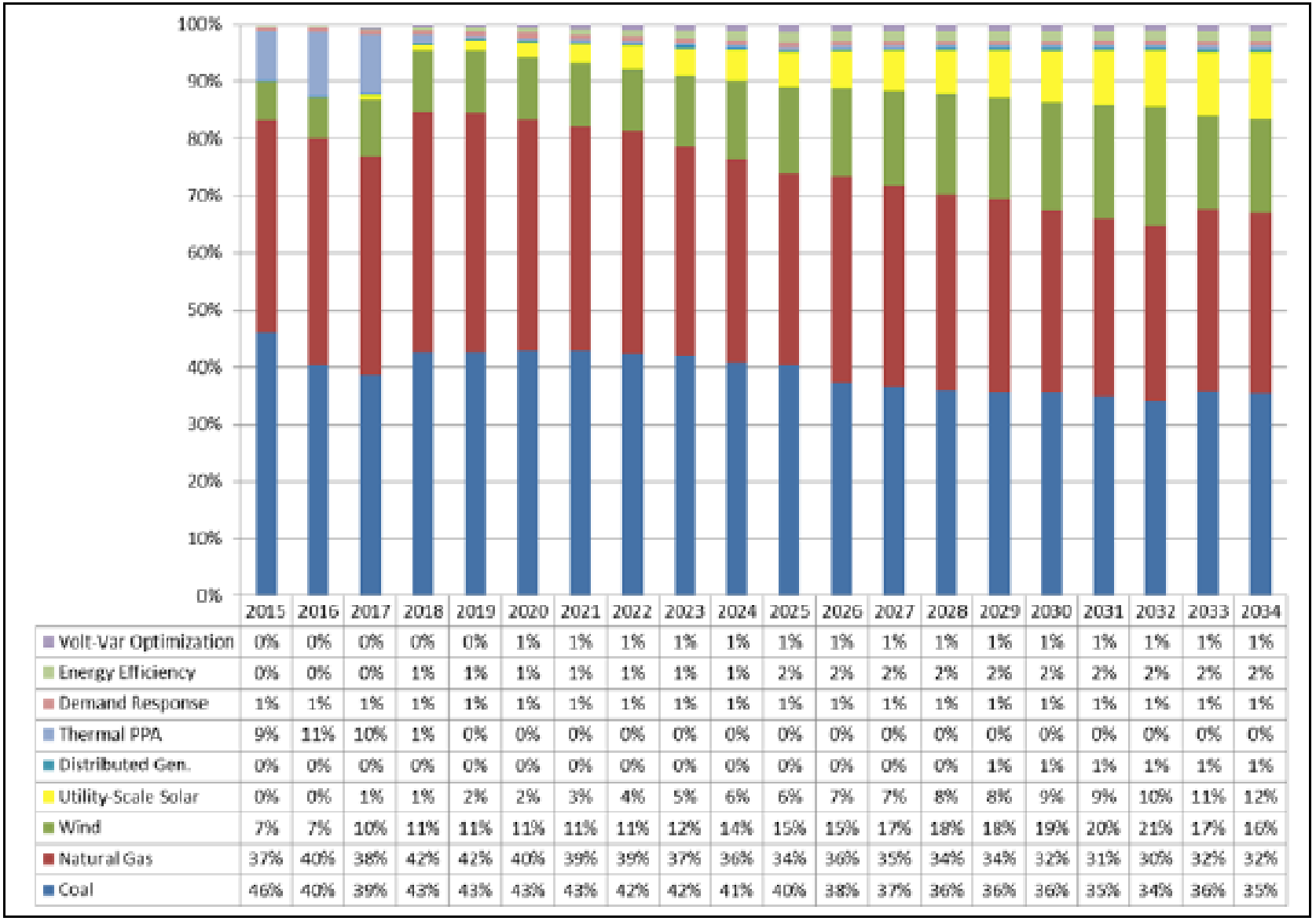
Louisiana Public Service Commission
Docket R-33253

- 10 Intervenors
- Creating a SIP preferable to a FIP
- Mass-based over rate-based
- CEIP generally supported
- CHP generally supported
- Robust modeling important

Existing Planning, Existing Consensus

Integrated Resource Planning

- Entergy Louisiana
- Entergy New Orleans
- SWEPCO
- CLECO



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Volt-Var Optimization	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Energy Efficiency	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Demand Response	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Thermal PPA	9%	11%	10%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Distributed Gen.	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Utility-Scale Solar	0%	0%	1%	1%	2%	2%	3%	4%	5%	6%	6%	7%	7%	8%	8%	9%	9%	10%	11%	12%
Wind	7%	7%	10%	11%	11%	11%	11%	11%	12%	14%	15%	15%	17%	18%	18%	19%	20%	21%	17%	16%
Natural Gas	37%	40%	38%	42%	42%	40%	39%	39%	37%	36%	34%	36%	35%	34%	34%	32%	31%	30%	32%	32%
Coal	46%	40%	39%	43%	43%	43%	43%	42%	42%	41%	40%	38%	37%	36%	36%	36%	35%	34%	36%	35%

Figure 41. SWEPCO Annual Nameplate Capacity Position throughout Planning Period (2015-2034)

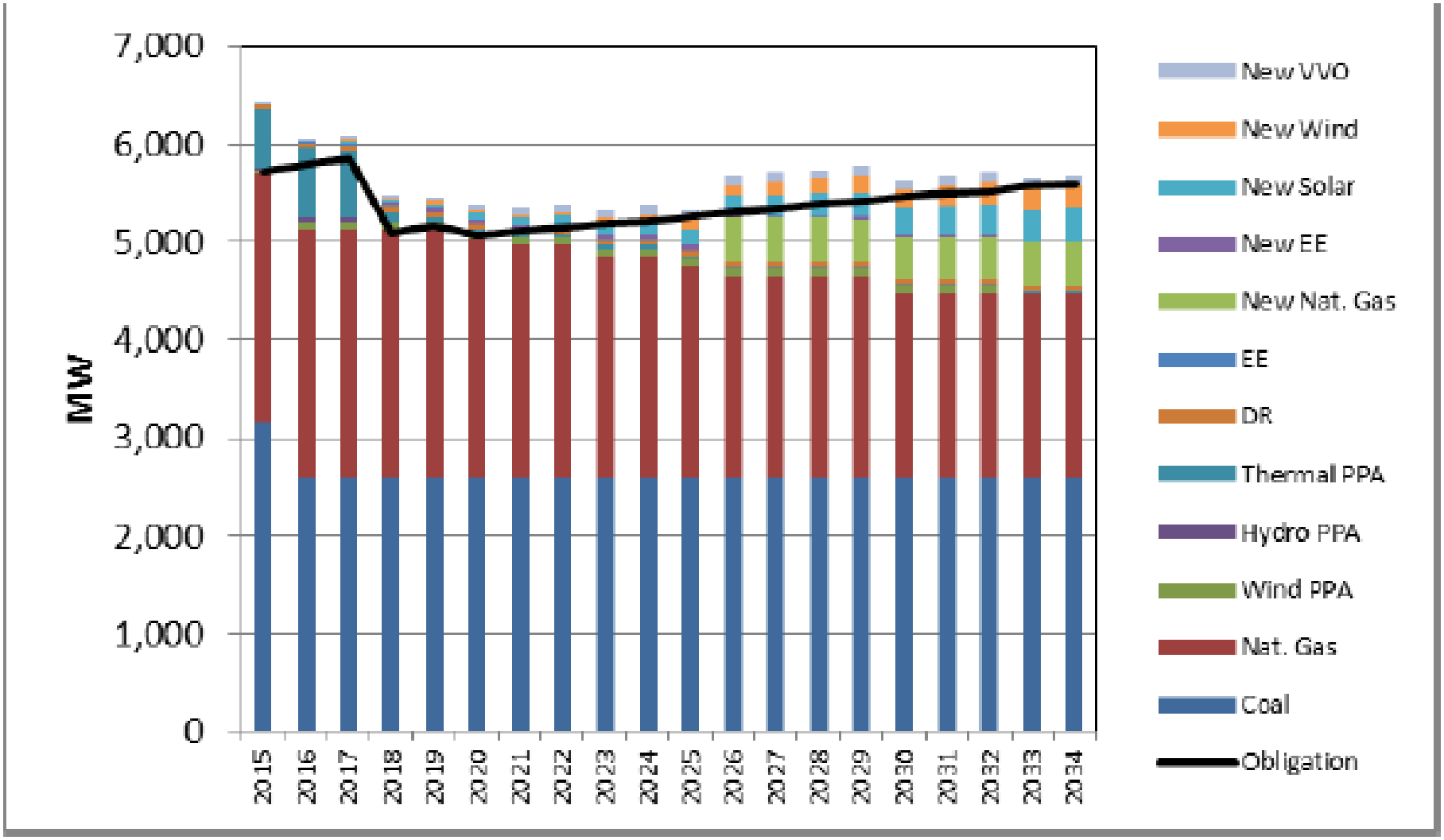


Figure 40. SWEPCO Annual SPP Capacity Position throughout Planning Period (2015-2034)

Existing Planning, Existing Consensus

Integrated Resource Plan:

Entergy Louisiana

200MW New Renewable Energy

Existing Planning, Existing Consensus

EM&V for Energy Efficiency
Evaluation, Measurement and Verification

Submitted by:

CLECO

ADM

Table 1-1 Impact Summary

Program	Annual Energy Savings (kWh)		Realization Rate	Peak kW		Realization Rate
	Expected	Verified		Expected	Verified	
Residential Solutions	8,797,844	9,051,337	102.9%	1,757.1	1,693.6	96.4%
Appliance Recycling	397,051	353,276	89.0%	45.2	68.9	152.4%
Small Business	1,752,145	1,672,761	95.5%	282.8	277.7	98.2%
Large C&I	3,496,774	3,492,474	99.9%	196.3	204.5	104.2%
CitySmart	716,535	715,818	99.9%	145.8	151.9	104.2%
Total	**15,160,349**	**15,285,666**	100.8%	**2,427.2**	**2,396.6**	98.7%

The contribution to portfolio savings by program is summarized in Figure 1-1.

Paradigm Changing: 19th, 20th, 21st Centuries

- *19th Century – Burning Coal*
- *20th Centruy – Burning Natural Gas, Nuclear Power*
- *21st Century – Renewable Energy, Battery Storage, New Technology*

Paradigm Changing: Global to Local

- *New, local jobs*
  - *Solar installations*
  - *Energy efficiency contractors*
  - *Energy raters*

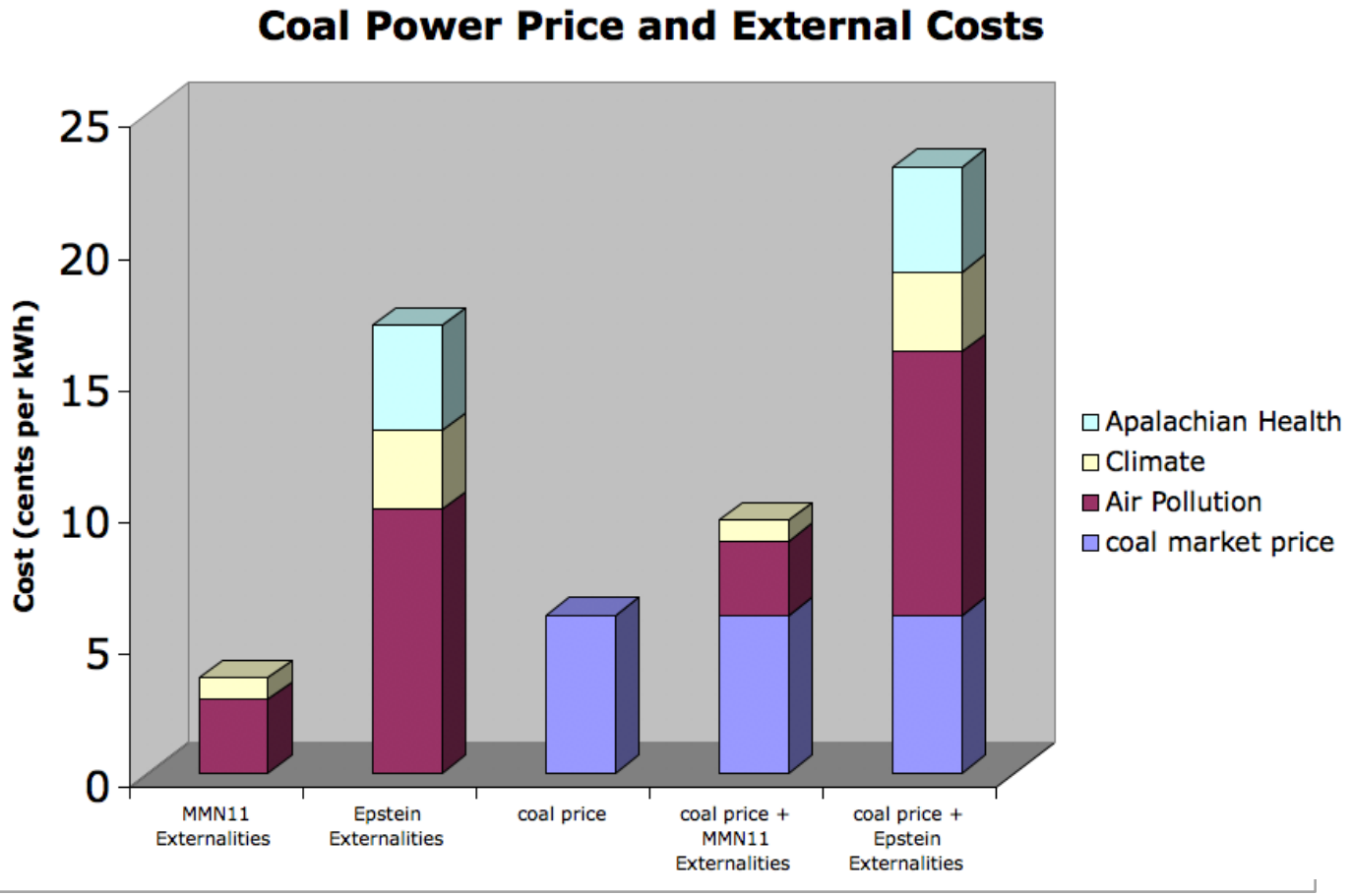
Arkansas Energy Efficiency Program added *9,000 New jobs* paying an average of *$20/hr*

- *Dollars saved on light bill go right back into the local economy*

Arkansas' investment added *$1.3 Billion* Of new economic benefit

Paradigm Changing: Health and Energy

- *Calculating "Externalized Costs"*



Sharpening the Pencil: Meaningful Involvement

- *Today is a good start! Bravo!*
- *Create a state Energy Coalition based on South Carolina's model*
- *Support Gulf Coast Center on Law and Policy plan to reach front-line communities*
- *Create a timeline for developing the SIP based on reasonable assumptions for CPP implementation*

Questions?